PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

BUREAU OF CLEAN WATER

SECTION 205(j)(1)/604(b) WORK PROGRAM

FOR

FFY2017

CALENDAR YEAR 2018

July 11, 2017

DRAFT

I. INTRODUCTION

For the period January 1, 2018 to December 31, 2018, the Bureau of Clean Water proposes to conduct four monitoring related activities.

- **Stream Use Designation/Redesignation Evaluations**
- **Cooling Water Intake Rules & Performance Standards Evaluations**
- **Increased monitoring in areas of gas drilling and gas drilling wastewater treatment.**
- **Susquehanna River monitoring for nutrients and in response to diseased YOY (Young of Year) and intersex smallmouth bass.**

During the calendar year 2018, the Bureau expects to expend the equivalent of approximately 6 work-years of effort on the activities included in this work program. The tasks proposed for these activities represent essentially the same work effort as in the most recent work programs. The Bureau expects to support staff attending and presenting relevant workshops, meetings, conferences, and trainings related to conducting these monitoring program activities and initiatives. Detailed descriptions of each activity (except Program Management) are provided below.

During calendar year CY2018, the Bureau expects to seek a waiver to not enter into contracts with river basin commissions and area-wide planning agencies. The 604(b) funding levels are expected to be lower in 2018 than are needed to pay staff salaries, continue routine stream redesignation evaluations, cooling water intake reviews, conduct monitoring related to the increased oil and gas drilling activities, to investigate diseased YOY and intersex smallmouth bass concerns in waters of the Commonwealth, and to support these and many other monitoring program activities and travel, and to also enter into any contracts at this time. The decision on passing through money to the river basin commissions and area-wide planning agencies will be re-evaluated should funding become available.

II. DETAILED ACTIVITY DESCRIPTIONS

1. Stream Use Designation/Redesignation Evaluations.

A. Work Proposed for Calendar Year 2018

During calendar year CY2018, the Bureau expects to undertake approximately 12 surveys to either establish aquatic life uses or evaluate the appropriateness of existing water use designations. The surveys generally include the collection of physical habitat and biological information. Pennsylvania's Quality Assurance Plans "Aquatic Life Antidegradation Protection Surveys" (January 12, 2012) and "In-stream Comprehensive Evaluation Survey Protocol" (August 23, 2011) are followed. The purpose of the surveys is to determine appropriate water use designations and identify environmental attributes, particularly outstanding ecological values, which may require special water quality protection.

Information from these surveys is the basis for data entries that contribute to Pennsylvania's Integrated Water Quality Assessment as well as rulemaking recommendations to establish or change water use designations.

B. Staff Resources

During calendar year CY2018 of this grant period, the Bureau expects to expend approximately 2 work-years of effort on these stream use surveys. Other costs, for laboratory analysis, supplies, and equipment, may also be incurred. EPA will be apprised of these needs, and requests for approvals of expenditures will be made directly to the EPA project officer.

C. Outputs

The outputs from these activities will be completed water body surveys and evaluation reports incorporated in Pennsylvania's Water Quality Assessment Database and Integrated Water Quality Monitoring and Assessment Report as appropriate. Any recommended designated use changes will be compiled into 2 rulemakings for the Pennsylvania Environmental Quality Board and EPA Region III consideration.

2. Cooling Water Intake Rules & Performance Standards Evaluations.

A. Work Proposed for Calendar Year 2018

In response to suspending the Clean Water Act Section 316(b) Phase II Rule in May 2007, EPA finalized the Existing Facilities Rule on May 19, 2014, published in the Federal Register on August 15, 2014 and became effective on October 14, 2014. Staff has begun implementing and will continue to implement the new regulation by incorporating the requirements into draft NPDES permits as these permits come up for renewal. Staff anticipate a significant increase in the number of permits requiring 316(b) BTA determinations following the July 2018 deadline set forth in the rule. Staff will participate in nationwide conference calls and webinars to get guidance from EPA on implementation of the rule. Additionally, regional office permitting staff will be trained in the requirements of the new regulation. Staff also intends to provide outreach to educate permittees that have not been subject to §316(b) requirements previously and are not familiar with the rule and its standards.

Staff will be coordinating with the US Fish and Wildlife Service (USFWS) and NOAA fisheries (when applicable), during the permit review process to ensure that permits with §316(b) requirements are also in compliance with the Endangered Species Act.

Staff will also continue to catalog historical documents and correspondence related to CWA Section 316(a) and 316(b) issues.

Additionally, Staff has been involved and will continue to be involved in the reviews and permitting of 'new facilities' as well, to ensure that the cooling water intake structures reflect the BTA to minimize adverse environmental impact in accordance with Section 316(b) and Phase I regulations.

B. Staff Resources

This work plan includes 2 work-years of effort, for calendar year CY2018, for this task.

C. Outputs

The outputs from this activity will be reviewing information submitted by existing facilities, demonstrations and other forms of documentation implemented under Section 316(b) of the Clean Water Act to reduce the impact on aquatic life from cooling water intake structures, temperature targets for aquatic life, an annual report to EPA for the USFWS and NOAA, and a catalog of historical documents and correspondence.

3. Increased monitoring in areas of gas drilling and gas drilling wastewater treatment.

A. Work Proposed for Calendar Year 2018

Continue stream assessments in areas of high density gas drilling areas. The purpose is to both establish pre-drilling conditions and monitor for changes as drilling proceeds. Water chemistry and biological, including algal, macroinvertebrate and fish, samples have been and will continue to be collected both established long term and dynamic short term (approximately one calendar year) sites. Water chemistry samples will include major parameters and metals found in fracking flow back water. Staff will deploy continuous instream water quality monitors to gather water temperature, pH, dissolved oxygen, and specific conductance data. The continuous data will be maintained in and analyzed with AQUARIUS software. Must maintain appropriate software license(s).

B. Staff Resources

There will be one year of work effort, including four months of related intern oversight, direction, field work, and data management efforts, for calendar year CY2018, by current Bureau staff.

C. Outputs

All continuous instream monitor data will be downloaded to and analyzed with AQUARIUS software. This will result in a large historical database and will alert managers to problems as they are uncovered. Stream assessment samples will be analyzed and reported by full time staff biologists. Any radiological samples indicating a problem will be referred to the Bureau of Radiation management for follow-up.

4. Susquehanna River and related monitoring for nutrients and in response to diseased YOY (Young of Year) and intersex smallmouth bass.

A. Work Proposed for Calendar Year 2018

Continue studies which began in 2012 (primary focus on the Susquehanna River basin). The work includes deploying continuous instream monitors at multiple locations throughout the summer to continuously measure dissolved oxygen, pH, temperature and

specific conductance. Conduct water quality transects at multiple locations to determine the distribution of dissolved oxygen and the mixing characteristics near the mouths of smaller tributaries and throughout the basin. These studies will help determine if these factors that could be contributing to elevated smallmouth disease prevalence. Additional chemical testing will be conducted to attempt to determine the contributing factors to the intersex condition. Instantaneous chemical samples will be collected and passive samplers will be deployed. The passive samplers concentrate the chemicals present in the water column to determine if pesticides, herbicides, or endocrine disrupters are contributing to intersex condition observed in adult bass.

B. Staff Resources

There will be one year of work effort by current Bureau staff, including four months of related intern oversight, for calendar year CY2018, to conduct the Susquehanna River YOY studies, algal taxonomic identifications and biochemical nutrient analyses.

C. Outputs

Results of the efforts will be a comprehensive assessment of the Susquehanna River and tributaries to determine and identify if any water quality conditions contribute to the smallmouth bass problem or other water quality impairments. Results will be reported in the 2018 Integrated Report.

III JOINT EPA/DEP EVALUATION

DEP and EPA Region III will conduct a joint evaluation of program status in accordance with 40 CFR 35.115. This evaluation will be scheduled at a time and place acceptable to both parties and may be performed as a face-to-face meeting or conference telephone call.